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VOL. I. AUGUST, 1929 No. 8

Agricultural Education

New Jersey Boys Demonstrating Apple Packing on Special Marketing Train

(See article on page 11)

Remember the American Vocational Association Convention at New Orleans on December 5, 6 and 7

EDITORIAL COMMENT

AGRICULTURAL EDUCATION
A monthly magazine, managed by an editorial board chosen by the Agricultural Section of the American Vocational Association and published at cost by the Meredith Publishing Company, Des Moines, Iowa.

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Vol. I. AUGUST, 1929 No. 8

PREPARE FOR THE A. V. A.

IN FOUR months the annual convention of the American Vocational Association will be upon us. What are we doing now to fulfill the promise that it shall be the greatest gathering of vocational educators the world has seen? In particular, what arrangements are we making that agricultural education will be represented in proportion to its importance?

As a group, we do not yet seem to have sensed the importance of this meeting as it is sensed, for instance, by the trade and industrial people. Yet it is quite as important to us. And we are not yet ready to admit that we are more provincial in our thinking and in our affiliations than are other vocational groups.

To get any adequate turn-out at New Orleans there must be a considerable representation of teachers. The best way to insure that teachers from the more remote sections will attend is to elect them as delegates and defray a portion of the expenses from the funds of teachers' associations. Several states are already doing this on a limited scale.

Going to the A. V. A. convention this year will be an unusually pleasant duty. Who of us has not longed to see New Orleans and the South? Here lies our opportunity.

* * *

CONTESTS

COMPETITION has always received a great deal of emphasis in vocational agriculture and never more than today.

At the same time, we have come to a realization of the need for emphasis on *co-operation*. We have founded a national organization and we have developed numerous other devices to promote it.

Which do we wish to emphasize most? Are the two compatible? What forms should our contests take to minimize the dangers of excessive competition?

It appears that there are rather definite answers to each of these questions.

Clearly co-operation must receive the greater emphasis. Any type of school activity which is likely to interfere with the fostering of a more co-operative attitude among the boys we teach should be omitted from our program.

But some measure of competition can be provided without danger, provided we choose the right sorts of competitive activities. Some competitive devices are much less likely to operate against the spirit of co-operation than others. Especially desirable are contests in which individuals and groups compete in *service* to the entire community, or state, or nation. Community improvement contests of the various sorts that have been evolved illustrate this type of contest. Here is possible a blending of selfishness and altruism which is impossible in judging contests and in most of our other contests.

It is too early to say whether these new types of contest will appeal to our boys sufficiently to allow them to replace those that are now more common. But some insist that they are even more interesting and, if they are, they certainly should win out for they will accomplish for us a type of results which we have not attained with the traditional sorts.

It appeals to the writer that contests of the older types have been overdone and that we have before us a period of elimination and substitution in that field.

* * *

PACIFIC REGION ENDORSEMENT

THE Agricultural Section of the Pacific Regional Conference, held in May at Portland, adopted the following resolution:

"We favor the continuation of the paper, *Agricultural Education*, and go on record in favor of urging every teacher of vocational agriculture in the Region to subscribe for the same. Furthermore, we thank the Meredith Publishing Company for their efforts and co-operation in helping to make this new magazine a success."

* * *

OUR NEED FOR COPY

CONTRIBUTORS have thus far been most generous in supplying us with articles for publication. In general, our needs are being very well met. We ordinarily have on hand copy enough for at least three issues. However, our supply is not a well-balanced one.

Long articles predominate; our writers seem to be "thinking in volumes these days," to quote a famous remark. Ordinarily we cannot use more than two or three such articles monthly and some are too long even for leading articles. Our readers compliment us most when we present an abundance of short, news-packed stories and resent our giving much space to any one writer.

All parts of the country are not equally well represented in our columns because the supply of articles from certain sections has been short. The West has supported the magazine most graciously but we have not been able to respond as we should like because we have been furnished so little material from that region. Certain states have been neglected for the same reason.

The teachers have not yet availed themselves to any considerable extent of the opportunity for expression afforded in the magazine. We still continue to hope that eventually the publication will be written mainly by teachers, as it is now read mainly by them. Given articles of equal merit, those written by teachers have precedence over any written by supervisors and teacher-trainers.

We have had few contributions as yet dealing with classroom procedures and devices. After all, our job is mainly done in the classroom and it would seem that we should show more interest in that phase. We are devoting a special issue in December to it, but we hope to print something each month.

It is apparent then that, in spite of our having on hand constantly a quantity of good copy, there is still opportunity for breaking into print. As you read the magazine from month to month you will sense the deficiencies that have been mentioned and others. We hope you will assist in removing them by sending in your own contributions and encouraging others to do so. A note to the editor suggesting someone who can write along some neglected line will be appreciated.

* * *

SUPPORT THE KANSAS CITY SALE

THE Third Annual Show and Sale for livestock owned by students in vocational agriculture in the central states will be held in the American Royal Building, Kansas City, Missouri, on September 19–20. C. L. Angerer, assistant supervisor in Missouri, will again be in charge.

There will be classes for fat calves of the beef breeds and for fat lambs and barrows. Sixteen hundred dollars or more will be distributed in prizes.

Ninety-eight baby beeves, exhibited in last year's show, sold for an average price of $16.92 or about a dollar above top market price. Four hundred seventy-eight barrows averaged $12.48 or 13 cents above the top. Sixteen lambs averaged $16 or $2 above the market's best.

Successful Teachers of Vocational Agriculture

DR. ARETAS W. NOLAN, University of Illinois

IN THE March issue of *Agricultural Education* appeared Case No. 1 of this series of Case Studies of a few of the most successful teachers of vocational agriculture in Illinois.

CASE NUMBER II

I. *Personal Facts and General Information:*

The second man I shall introduce in this series is Mr. Walter Newlin of Casey, Illinois, not because he is second in rank, however. If Illinois had the Master Teacher plan, Mr. Newlin would qualify. He graduated from the College of Agriculture of the University of Illinois in 1918, and after service in the World War, came, upon the recommendation of the Department of Agricultural Education, to Casey in 1920.

The first year's work in the community consisted mainly of classroom teaching and careful and tactful study and observation of the community problems. There were many farmers in the district who were opposed to high school education, vocational agriculture, and the increased taxes. Some of the first work done in the community was the promotion of a program in co-operation with the county farm advisor. Contacts were made with the farm boys and their fathers. The early approaches to community extension service were in connection with soybeans, chinch bug control, limestone, sweet clover, and seed work. The work done with crop seeds has contributed more than any other one activity to the success of the agricultural department at Casey.

II. *School Methods:*

Yearly plans are made based upon the needs and conditions of the community. Agricultural improvement objectives are tested and methods for accomplishing those are set up. The following is a brief outline of the annual program of agricultural improvement for 1928–29:

(A) *Existing Conditions in the Community:*

1. A very poor type of soil in general —gray silt loam underlaid with tight clay.
2. Too much timothy hay grown in the past.
3. Very acid soils which will not produce clover. Needs limestone.
4. Too little attention paid to crop rotation with legumes.
5. A territory well adapted to dairying, but very little dairying has been practiced.
6. Too little attention given poultry.

(B) *Ultimate Long-Term Improvement Objectives:*

1. Soil improvement with the use of limestone and the growing of legumes.
2. Starting and building up of good dairy herds.
3. Same for poultry.

(C) *Objectives for* 1928–1929:

1. Poultry culling. Better feed, care and management of poultry.
2. Dairy projects, better feed, care and management.
3. Swine projects and swine clubs.

Walter Newlin

4. Soil improvement.

(D) *Methods of Accomplishing These Objectives:*

I. All-day students:

1. Ten boys taking dairying as project. They weigh, feed, milk, and test for each cow.
2. Seven boys have poultry projects.
3. Eight boys have swine projects.
4. The important aim is soil improvement with limestone and legumes followed by the dairy cow.

II. Evening and part-time schools:

Evening schools have been held as follows: Tractor Course, 1926; Soils and Crops, 1927; Dairying in 1928, and Soils, Crops, and Dairying in 1929.

There have been many swine clubs, dairy calf clubs, and other 4-H clubs. Farmers, Rotarians, and business men all co-operate in the interest of agriculture.

Subject-matter for courses in vocational agriculture is determined and selected to fill the needs of the community and to help solve the community farming problems. In introducing a new unit of subject-matter Mr. N. seeks to secure the interest of the pupils thru illustrations that are found in the community. The following outline lesson plan is taken from the plan book.

Agriculture-I. Sec. I & II.
September 5, 1929
POULTRY CULLING

Define culling:

I. Importance or object:
1. Increase egg production.
2. Lessen feed cost.
3. Build up flock.

II. Time for culling:
August, September.

III. Points to consider:
1. Molting: (Late, early.)
2. Body:
(a) Head, (b) eyes, (c) comb, (d) beak, (e) back, (f) legs, (g) size and flexibility of abdomen.
3. Pelvic arch:
(a) Pin bones, (b) keel bone, (c) breaking down, (d) vent.
4. Color:
(a) Beak, (b) wattles, (c) comb, (d) shank.

September 6, 1929
Demonstrate points to class.
September 7, 1929
Culled flock.

A good system of filing bulletins and circulars is used, an adequate reference library and twelve or more farm magazines are provided.

III. *Project-Field, and Community Activities:*

Farm projects for this year are very encouraging at Casey. There are 15 in dairying, 9 in poultry, 4 in swine, 11 in farm shop, and 4 or 5 in miscellaneous projects. The stage and condition of the projects and the needs of the boys are factors which determine the frequency of visitations. The major summer activi-

Scenes from Casey, Illinois, Showing Work of Walter Newlin and His Boys

The farm shop. Dimensions, 22x40 feet

The seed house, operated by the Agricultural Club

ties for the past few years have been project supervision and club work. Some of the outstanding community extension services have been seed work at the seed house, harvesting sweet clover, testing soils, culling poultry, short courses, farmers' days and personal service. There have been four short courses: tractor, attendance 20; soils and crops, attendance 60; dairy, attendance 33; dairy and crops, attendance 48.

During the summer of 1927, Mr. Newlin helped to promote and organize a limestone company for the purpose of making road-rock, and agricultural limestone for the farmers. During 1928, 4,600 tons of limestone were sold to farmers at a saving of from 50 to 60 cents per ton, when compared to shipped limestone prices. Prospects are for a sale of approximately 10,000 tons in 1929. Under this plan farmers can get limestone in any amount and at any time.

Dairying from a whole milk standpoint had not been given much consideration in this community a few years ago. Dairying has recently been promoted. The Rotary Club has dairy programs for the farmers. There is a dairy committee of business men, and there have been two dairy short courses, all of which are bringing results. There is a dairy calf club of about 40 boys and girls organized this year. The press and the leading farmers and business men are following Mr. Newlin in the promotion of the dairy industry, and the milk checks of the farmers have been materially increased.

There is a seed house, with the sign on the front, "Better Seed," used most effectively in community extension service. The size of the seed house is 18 x 36 feet. It has an elevator which carries and dumps the seed on the second floor. Here there is a superior sweet clover seed huller and a No. 47 clipper farming mill. There are about four dozen seed corn racks, of 100-ear capacity, owned by the Agriculture Club. All kinds of seed work is done for the farmers at a small cost to them. Approximately 2,500 bushels of sweet clover seed has been hulled and cleaned during the past five years. An average of 400 to 500 bushels of soybeans are cleaned each year. About 1,000 bushels of wheat were cleaned last fall. The amount of timothy is decreasing each year and sweet clover is taking its place. The amount of red clover cleaned is also increasing each year. This work is done by the boys and the money turned over to the Agriculture Club to buy equipment and to promote new projects in agriculture.

The Agriculture Club made some sweet clover seed machines with which it has harvested seed for farmers, and in return received a share of the seed. In this way the club had for its part last season more than $2,500 worth of seed. The club decided that one of the best ways to invest this money would be in swine. The idea was to introduce a better type of swine in the community, to promote better feeding, care, management and sanitation, in order that more money be made from swine, and more interest for the farm created among farm boys. Each member of the Swine Club received one gilt from the Ag Club. The boys were to observe all rules for proper feeding, care, management and sanitation. All gilts were registered and vaccinated for cholera. All gilts were bred to good registered boars to farrow after March 1. Each boy was to return two of the offspring to the Ag Club not later than September 20, to be given to other boys for a Swine Club the next year. The Ag Club purchased and distributed 12 Duroc Jerseys, and 12 Poland Chinas to 24 boys. The cost of these gilts was about $42 a head. The project came out well and continues to expand until now the whole community shares the benefits of a better swine husbandry and more profitable farming.

There is a farm shop on the school grounds built by the agricultural students. The shop is 22 x 40 feet. Here the farm boys make anything they want for the farm, or repair farm tools and implements. In 1926-27 the boys made seven sweet clover seed harvesters. There are more than 25 of these harvesters in the community owned by farmers and boys who have built them in the farm shop for their own use.

Mr. Newlin says, "I have more hopes for the farmers of this community at the present time than ever before. They are beginning to think and act together, a thing which must come about before we can have a real community progress."

IV. *The Teacher and His Job:*

Mr. Newlin visits other departments during the year; altogether he has observed and studied the work of over twenty other schools. He attends all state and district conferences and has attended four national conventions. The teacher tries to keep up with all progress in agricultural education.

"I feel that I would not change my job for any other along agricultural lines," said Mr. Newlin. He has had many requests to go into farm advisory work, but he prefers vocational agriculture.

"After one has been in the same community for several years and has the co-operation of the community, and can see results which have come thru some efforts put forth, there is a feeling that vocational agriculture is a real job."

V. *Comments of Supervisors and Patrons:*

"Some outstanding elements of this teacher's personality, making for his success as a teacher of agriculture are:

(1) "Honesty and integrity so that he has the unquestioned confidence of the patrons and farmers generally."

(2) "Modesty and ability to keep away from being a professional promoter."

(3) "Industry, long hours, hard trips and hard work have no terrors for him."

(4) "No hail fellow well met—but respected by all."

"A landowner and heavy taxpayer, who does not live in the district, says Newlin is worth $10,000 a year to the township."

"A very common saying is, 'What does Newlin say about the proposition?'"

"A farmer who formerly was bitterly opposed to the township high school now attends short courses, and is a supporter of the whole school program, largely because of Newlin's work."

"One school board member said, 'Get Newlin whatever he wants for his department; you will get your money's worth out of it.'"

"Nine boys are now in the state agricultural college, some preparing to teach vocational agriculture, as a result of interests awakened while in his high school courses."

"The teacher of agriculture is always loyal to his principal, he can be counted on to support every school activity."

"He is an active Rotarian, Thirty-second degree Mason, and a churchman."

"I have worked with Mr. Newlin," says a colleague, "for the past four years. During that time the thing that impressed me most was his terrific energy and the way he adjusted himself and his work to meet the needs of the community. He studied those needs carefully, and after diagnosing the case, recommended a remedy and then devoted his tremendous energy to carrying it out. He has initiative, executive ability, is diplomatic in his approach, and yet is exceedingly stern after his demands are once made. He has the enthusiastic support of the farmers of the community. He has that support because he has rendered a very definite and concrete service to the farmers."

"His sweet clover harvester, his limestone quarry, his financial scheme for dairy purchases, his farm shop work, are outstanding factors in his success, secured because of his energy and the people's confidence in his integrity and reliability."

Skidmore Lost to Agricultural Education

PROFESSOR H. M. SKIDMORE, who has been in charge of Agricultural Education at the University of California for a number of years, has resigned from that position to accept a position as Dean of Instruction in the Sacramento Junior College. This change results in the loss to the field of agricultural education of one of its outstanding leaders. Previous to entering upon his work at the University of California, Professor Skidmore had been the agent of the Federal Board for Vocational Education for the Western Region. In that capacity, he had a great deal to do with the shaping of our national program in its early years.

The Department of Vocational Agriculture of the Bruce, Wisconsin, High School issues an annual printed bulletin. This year's publication contains 24 pages in addition to advertisements. It includes pictures of departmental events, a calendar for the year, write-ups regarding graduates, and good descriptions of various activities of the agricultural classes. William F. Weichelmann is the instructor responsible.

Dr. C. H. Lane assisted in judging the Vocational Boys' Public Speaking Contest at the University of Maryland on May 4. The topic was: "Opportunities in the Vocation of Farming." One hundred fifty delegates attended the meeting of the Future Farmers of Maryland held in connection with the annual contests.

A series of four radio talks by Edward T. Franks, vice-chairman of the Federal Board for Vocational Education was broadcast on Tuesday evenings during the month of July from Station WJSV of Washington, D. C. The address of July 30 dealt with "Vocational Education for the Future Farmers of America."

Servicing the Agricultural Teacher

W. G. CRANDALL, Clemson College, South Carolina

THIS paper treats briefly of the opportunities of the colleges of agriculture to furnish available data to teachers of agriculture. No attempt is made to discuss the opportunity of the agricultural experiment stations to develop needed data which have not been developed or which are not being developed at the present time. No doubt there is a need for many data by the teachers of agriculture which are not available at the colleges. However, at this time it appears more worthwhile to discuss the opportunities for furnishing those data which are available.

I. Recent Changes in the Nature of Subject Matter

In recent years there has been a material change in the nature of the subject matter taught by teachers of vocational agriculture. During the past five years teachers of agriculture have dictated fewer college notes to their students; they have made fewer assignments in textbooks, and they have given less personal opinion. They have replaced, to quite an extent, college notes, textbooks, and opinion by a study of the practices of successful farmers; experiment station data; the contents of trade, produce and farm journals; the results obtained by produce associations and exchanges, and data published by the United States Department of Agriculture.

Teachers of agriculture have learned from actual experience and from studying the results of experiments conducted by people engaged in agricultural education work that the facts originated by the agricultural experiment stations, produce associations and exchanges, and the United States Department of Agriculture, are much more effective as instructional data with all-day, part time, and evening class students than the general information which was taught in the early years of agricultural instruction in the public schools. The use of original and unbiased facts as instructional data by the teachers of vocational agriculture has enabled them to secure a larger number of changes to improve practices on the farms in their communities. The farmers have changed their practices more readily, and the changes have been made on a much larger acreage and on a much larger number of livestock.

The author of this paper and his associates have conducted experiments with one thousand farmers with one of the objectives to determine the nature of subject matter needed by teachers of vocational agriculture for instructional purposes. The farmers with whom we worked were eager for original data which were applicable to their problems. They preferred data which had been accumulated over a comparatively long period of years; data which had been originated near home, and data which were up to date.

Our experiments tend to indicate that the attendance at evening classes and changes in farm practices depend to a large extent, on the nature of the instructional data taught. Experienced farmers do not continue to attend evening classes where the teacher gives advice and general recommendations, but they do continue to attend as long as they are taught facts which aid them in the solution of their farm problems.

In our experiments on evening class work, 16 undergraduate students enrolled as many as 250 farmers at one time for systematic instruction. These farmers were enrolled in classes in nine neighborhoods in the vicinity of the college. A total of 93 class meetings were held in these nine neighborhoods by the undergraduate students during the scholastic session of 1927-28. The average attendance per class meeting, for the 93 meetings, was approximately eleven farmers. The percentage of farm practices changed, which should be changed for those problems taught, was approximately 67.

A number of agricultural colleges in the south and east have recently been developing special services for keeping teachers of vocational agriculture informed regarding new developments in technical agriculture.

In this article, Professor Crandall gives a comprehensive statement of the beliefs which underly this new practice in order, as he says, "to test the teachers of the country as to their thoughts and wishes along this line." We hope there will be many comments on this article from instructors in the field. Is Professor Crandall right? How badly is this type of service needed? Is it feasible? Do you want it? We shall be glad to publish articles dealing with these questions.

The teacher-trainers made no effort to enroll these farmers or to encourage them to attend the classes. This was left entirely to the undergraduate students, and for this reason it is felt that these farmers attended the meetings for the value of the instructional data. Certainly they did not attend these meetings night after night to listen to advice given by an undergraduate student, and furthermore, they would not have changed many of their practices.

II. The Scope of the Needs

The efficient teacher of agriculture visits the farmers, young and old, of his community for the purpose of determining their needs for agricultural instruction; he visits all-day, part time, and evening class students. On these visits the teacher is asked questions by the farmers on practically every phase of farming. The teacher, whose work is most effective, does not make it a practice to answer the farmers' questions in the field. Instead, the farmers are enrolled in evening classes where systematic instruction is given on the problems indicated by the farmers' questions.

The teacher of agriculture may know the answers to many of the farmers' questions. He may have studied the facts and arrived at correct solutions of the farmers' problems. Nevertheless, he needs instructional data in the form of facts if he is to do effective teaching.

Teachers of agriculture have received many facts from their local experiment stations which they have used for instructional purposes with their students. However, many teachers are unable to obtain from their local stations sufficient data to meet their needs for systematic instruction on such a wide range of problems as indicated by the questions asked by their students.

There seems to be a tendency for different experiment stations to specialize on different problems, and for this reason the local station may be unable to supply much needed data by the teachers of agriculture. The instructional data for many problems may have been thoroly developed by experiment stations other than the local station, and consequently, the local station may not have attempted to conduct experiments on these problems. In such cases the teachers have to depend upon out-of-state experiment station data.

Then again, our experiments on evening class work clearly indicate that, even tho the local station has ample data to solve the farmers' problems, applicable data from other stations which verify the data of the local station, give the farmers greater confidence in the facts taught and, consequently, tend to increase the number of practices changed on the farms.

Our observations over a period of several years indicate that the farmers enrolled in evening classes invariably request that all the facts applicable to a given problem be taught, regardless of the experiment station that originated the facts, and the efficient teacher of agriculture encourages his students to study all applicable facts on a given problem before they make changes in their farm practices.

In our four years of experience in attempting to meet the needs of teachers of agriculture for instructional data, we have found it necessary to request data from practically every agricultural experiment station in this country.

III. What Assistance Do Teachers of Agriculture Need in Obtaining Instructional Data?

The farmers raise so many different questions and the needed instructional data have to be gathered from so many different sources that most teachers of agriculture have found it to be practically impossible for them to collect and organize the essential data for their instruction. They have neither the time nor the facilities for doing this work on an adequate scale.

If the teachers were to collect the data needed for their work, it would be necessary for them to have practically all of the experiment station bulletins, progress reports, and annual reports issued in this country. Without these publications the teachers would have no means of knowing what data were available. It would be very expensive to the experiment stations to mail all the bulletins to the teachers of agriculture in this country. This practice appears to be impracticable.

In the state where one hundred or more teachers are employed, we would

have one hundred expensive employees trying to do the same work; a work for which none of them have the available time and necessary equipment, and a work which could be done to a better advantage by one or two persons in a central office. In other words, if the facts are collected by some person employed especially for this work, we prevent duplication of effort on the part of a large number of teachers of agriculture. Therefore, it appears impracticable for individual teachers to spend the necessary time to collect and organize instructional data on any large scale when it can be done more efficiently by some central agency or bureau.

The experiment stations have much unpublished data which is needed by the teachers of agriculture. In many cases the experiment station officials are willing for these data to be used by the teachers of agriculture, and it is simply a question of someone collecting and organizing these data for this purpose. It certainly would be impracticable to send much unpublished data to any large number of teachers.

Many valuable documents are out of print, and are available to only a few agricultural workers. Copies of this material are to be found in our agricultural libraries, and the desired data can be made available to teachers of agriculture at a small cost by reprinting.

A number of experiment stations mimeograph or print progress reports from time to time. These are usually mimeographed or printed in limited numbers, and are not available to a large number of agricultural teachers. Teachers of agriculture need assistance in obtaining the facts contained in these mimeographed or printed reports.

Many of our experiment station bulletins published several years ago represent experiments which are still in progress, and there are unpublished results of the more recent years of these experiments which are needed by the teachers of agriculture. However, it is necessary in most cases for someone to collect and distribute this material to the teachers.

Comparatively few, if any, teachers have been successful in collecting and organizing the data essential for instruction on all the problems which they need to reach.

IV. What Agency Should Render the Assistance?

To render to teachers of agriculture the assistance which is briefly described in this paper necessitates some organization. The teacher-trainers and state supervisors are probably more familiar with the needs of the teachers of agriculture than any other group of persons. The state supervisors are constantly visiting the teachers of agriculture, and the teacher-trainers have contact with all-day, part time, and evening class students, farmers, and teachers of agriculture in those communities where practice teaching is conducted. Also, the resident teacher-trainers as well as the itinerant teacher-trainers visit many teachers of agriculture in the field with one of the purposes of their visits to learn their needs for instructional data.

The needed assistance for collecting and organizing instructional data might be rendered from the office of the state superivisor of agriculture or from the teacher-training departments of the agricultural colleges. However, there are several reasons why this assistance can be more advantageously rendered by the teacher-training divisions or departments of the colleges. Due to the fact that many of our state supervisors are not located at the colleges, the members of the teacher-training departments have a better opportunity to familiarize themselves with the different experiments which are in progress. They also have a better opportunity to discuss these experiments with the experiment station workers. The agricultural libraries in our agricultural colleges are a most valuable asset in rendering this assistance to the teachers of agriculture. In these libraries are to be found most of the experiment station publications over a long period of years.

Perhaps one of the most outstanding reasons for this assistance to be rendered by the teacher-training departments is that the facts collected and organized may be used by the teacher-trainers in the practice departments in training prospective teachers of vocational agriculture. This practice should thoroly familiarize the prospective teacher of agriculture with the service which he may expect as a teacher of vocational agriculture in the field. It also gives the teacher-trainers an opportunity to study the effectiveness of different facts for instructional purposes and possibly improve the organization of these facts before they are published.

On the other hand it is a function of the state boards for vocational education thru their representatives to approve the subject matter taught to persons enrolled in all-day, part time, and evening classes in agriculture. Therefore, if this service is to be rendered by the teacher-training departments, it is essential to have close co-operation between state officials and college officials. The state supervisors are in a position to state to the teacher-trainers those topics on which they wish to have facts collected for use by teachers of agriculture. This puts the teacher-trainers in a position to know that their efforts will not be in vain.

In South Carolina we have published instructional data for teachers of vocational agriculture for the past four years. This material is published monthly in a sixteen-page bulletin. The title of this bulletin is "Agricultural Education." At the present time 3,000 copies of each issue of this bulletin are printed. These bulletins are free to the teachers of agriculture, and the students may purchase them for 36 cents a year. It is the practice of most teachers of agriculture in South Carolina to have their pupils subscribe to this publication.

In some sections of the country there are excellent opportunities for co-operation among several colleges. An example of this opportunity exists in the Piedmont Section. No doubt many of the data originated in North Carolina, South Carolina, Georgia, and Alabama are applicable to the farm problems of the Piedmont Section. An exchange of data among these states would materially facilitate the work of the teacher-trainers in collecting and organizing instructional data for the teachers of agriculture.

Country Life Conference

ARRANGEMENTS are practically complete for a very attractive program to be presented in connection with the annual meeting for 1929 of the American Country Life Association to be held at Iowa State College, Ames, Iowa, on October 17–20.

Prominent persons who will participate include Ex-Governor Frank O. Lowden of Illinois; Miss Mabel Carney of Teachers College, Columbia University; Dr. E. L. Kirkpatrick of the University of Wisconsin; Dr. Nat. T. Frame of the University of West Virginia; Professor E. L. Morgan of the University of Missouri; Dr. A. W. McKay of the United States Department of Agriculture; John D. Willard of the American Association for Adult Education; Dan Wallace, editor of "The Farmer"; and many others of national repute.

The general theme of the meeting is "Rural Organization." There will be sections for Adult Education, Rural Church Programs, Economic Co-operation, General Farmers Organizations Programs, Health and Social Welfare Programs, Government and Taxation, Rural Press Programs in Rural Organization, Rural Schools, Rural Landscaping and Recreation, Urban-Rural Relations. There will be a special section also for college students. In addition there will be a strong general program.

Vocational agriculture comes in for its share of consideration. Dr. C. A. Fullmer, state director for Nebraska, and Professor W. H. Lancelot of Iowa State College are among the speakers from this group. Teachers of vocational agriculture constitute one of the nine groups for whom the program is being adapted.

MATTERS pertaining to the organization of state chapters of the F. F. A. were discussed at several of the state conferences of teachers of vocational agriculture this summer. Henry Groseclose, the executive secretary, estimates that by the time of the second annual meeting of the F. F. A. to be held at Kansas City in November, at least 40 states will have been granted charters.

Virginia, New Jersey, and Iowa teachers have voted at their summer conferences to support *Agricultural Education* unanimously and to include the subscription price in the dues of their state associations. It is likely that similar action has been taken at a number of other conferences but that it had not been reported up to the time of going to press.

A concrete spillway dam constructed on the school grounds of the Academy Consolidated School of Temple, Texas, has proved a worthwhile demonstration. Hardly was the work completed when the rains and floods set in. Within the first month, three and a half feet of soil had accumulated in front of the dam. J. A. Hendricks, instructor, reports that the project has made a great hit with the people of the community.

A district encampment of Future Farmers was recently held at Lake Cisco, Texas.

Our Leadership in Agricultural Education

DEAN ALFRED VIVIAN of Ohio State University

ALFRED VIVIAN, Dean of the College of Agriculture of the Ohio State University, teacher, administrator, student of human nature and of farm problems, and friend of every student and farmer, is a man of keen insight, clear foresight and balance; a man of quiet dignity and good judgment, quick to grasp the other fellow's point of view.

He was born at Mineral Point, Wisconsin, on March 14, 1867, and received his elementary and secondary education in the schools of that town, being a member of the first class that completed the newly adopted four year high school curriculum. A period of poor health after graduating from high school delayed his entrance into the University of Wisconsin for six years, so that when he did go to college it was at an age that would have discouraged most boys, but which in his case merely meant that he brought to his college work a more mature mind, and a greater determination to get as much as possible out of his college course. His schedule while in college was always as heavy as the authorities would permit. He majored in chemistry because of a feeling he had that chemistry would help to explain many of the problems of farming, a subject in which he was always interested.

After graduation he was for eight years an assistant to Dr. Babcock, in the Agricultural Experiment Station of the University of Wisconsin, doing his major work on the researches on milk and cheese. He had always intended to take up practical work, but due to an accident, or a providence, he was thrown into teaching. Dean Vivian has frequently said that he became a teacher thru a series of accidents, for on several occasions when misguided friends had almost steered him into other fields an accident intervened and returned him to his teaching.

In 1902 he was called to the Ohio State University as Associate Professor of Agricultural Chemistry. In those early days he taught not only agricultural chemistry but freshman chemistry to the students in agriculture, home economics and veterinary medicine.

His influence did not stop with the classroom or with merely teaching chemistry. He was interested in his students as people, and was never too busy to advise with them or help them with their problems. Soon he became known as one of the best teachers at the university. His classes were well filled and the students loved him, not only for what he taught them in his courses but because of his friendly interest and advice in their problems. His courses were never snap courses. He expected his students to work, and they were ready and willing to work because he was always fair. His explanations were clear, concise, and to the point. A student always felt that something had been gained after attending his class.

Very soon he took up the study of soil fertility along with his chemistry work. In this line he became an authority, both inside the classroom and outside, which rank he still holds. Many people use his book on "First Principles of Soil Fertility," and I will venture to say that not one of his students has forgotten the special edition of that book which was used in his classes, with every other page blank so that notes could be written in at the proper place. Also, I am sure that his students have not forgotten his "Organic Railroad" which he used to transport them from one perplexing organic compound to another and back again.

In 1915 he was made Dean of the College of Agriculture of the Ohio State University. He has not been an administrator to sit in his office and direct, but has gone out and mingled with the students and people. He has always been interested in education and better teaching methods—not only in agricultural education but in education at large. As a result of this, when the Ohio State Board of Education was organized in 1917 he was appointed a member. His colleagues recognizing his ability and leadership made him their president in which capacity he served until the board was discontinued because of a reorganization of all of the state departments. It was during this time that he fostered the development of vocational education so that he is known as the Father of Vocational Education in agriculture and home economics in Ohio. It is interesting to note in passing, that Dean Vivian has long been interested in secondary instruction in agriculture, and had been working for years to induce a few of the rural schools in Ohio to adopt a four-year sequence of agricultural subjects for those who were interested in farming. Upon the passage of the Smith-Hughes act, his plan became the basis of the Ohio state plan for vocational education in agriculture. He did not confine his efforts to Ohio, however, but helped in working out the national plans. He made several trips to Washington in this connection.

He has kept in close touch with the students, and no matter how busy he has been, has always welcomed them and been ready to help them with their problems. He understands students and their problems very thoroly, and even now keeps in close touch with student opinion. The students say that he has never forgotten the time when he was in the place they now occupy. Perhaps the one compliment he cherishes most was the remark by the late Dean Hunt who in offering him a position said, "I can find others who can teach agricultural chemistry, but I am looking for a man to teach agricultural students."

Not only is he known in Ohio but he is known outside of Ohio, in the United States and abroad. In the meetings of the Land Grant College Association his advice is always sought. He is quiet and calm in his deliberations and always thinks things thru before he gives an opinion. A number of the other states have sought his aid in making out a program of agricultural work. A number have called him to visit them personally and help them, while others have written time and time again for his advice and counsel. In India he is also known, for there he helped Sam Higginbottom establish the School of Agriculture at Allahabad.

He is in constant demand as a speaker and is continually called upon to furnish articles for the agricultural press. He cannot accept half of these calls, for if he did he would be doing nothing else, and even then it is doubtful if he could make all of the engagements for which he has been asked.

He has kept in touch with scientific work thru his membership in "The American Association for the Advancement of Science," "The Society for the Promotion of Agricultural Science," "The American Association for the Advancement of Agricultural Teaching," "The National Society for Vocational Education," and "Sigma Xi." He is also an active member of the Grange, where he enjoys meeting and mingling with the farm folk.

Dean Vivian is an able leader and the College of Agriculture of the Ohio State University has prospered under his wise leadership, for it has been under his guidance that most of its development and growth has come.

(Written by W. F. Stewart, Ohio State University.)

TWELVE ATTRIBUTES OF AN AGRICULTURAL LEADER

Dean Alfred Vivian, College of Agriculture, Ohio University

"Abounding FAITH in the importance of the work.

"Infinite TACT in meeting trying situations.

"Unlimited PATIENCE in overcoming community inertia.

"Endless GOOD NATURE in face of all trials.

"A saving SENSE OF HUMOR when nothing else will meet the situation.

"A large VISION of the work to be done.

"Ability to LOSE GRACEFULLY and to REBOUND after each defeat.

"Indomitable COURAGE in standing for the right.

"A grim DETERMINATION to see the work put thru to its completion.

"A contagious ENTHUSIASM that inspires local leadership.

"Unquenchable OPTIMISM in spite of all discouragements.

"Unreserved BELIEF IN THE IMPORTANCE OF THE FARM FAMILY to the commonwealth."

Mr. C. O. DuBois, who has been director of the State School of Agriculture at Delhi, New York, for the past twelve years, retired from that position on July 1. Mr. DuBois has seen 37 years of teaching service in the public schools and state schools of New York. He is succeeded at Delhi by H. L.Smith who has been head of the Department of Animal Husbandry at the State School of Agriculture at Alfred and who is president of the New York Association of Teachers of Agriculture.

New York "State Farmers" are known as "Empire Farmers" in the terminology adopted by the Future Farmers of that state.

Looking Forward In Teacher Training In Agriculture

EDMUND C. MAGILL, Virginia Polytechnic Institute

THERE is not an instructor of vocational agriculture who is not directly affected by teacher training at the Agricultural College. Therefore the thoughts under this interesting title should appeal to all readers of this magazine. The predictions herein are based upon the conviction of 23 leaders in our national vocational program.

Teacher-training departments have four responsibilities. These are teacher preparation; professional improvement of those in service; research and investigation, and general service (service to the institution and the public which is neither teaching nor investigation).

Teacher Preparation—The First Function

1. Participation of Trainees. What is the recent outstanding development in teacher preparation? A conviction that efficient training cannot be done except thru a full program of participation. The fact is that trainees are now successfully doing under supervision everything of importance expected of an agricultural instructor. Trainees are conducting supervised practice programs of all day students; conducting successful community fairs; conducting evening school and part time instruction; and on thru a large list of activities.

The one fault that has seemed in evidence is the difficulty in securing a full, well rounded program of participation. It is easy to stage good participation in evening school instruction at the expense of other essential training. It is an entirely different task to secure such evening school training and yet retain all else in the program that is fundamental. The idea of "teaching by doing" has come more slowly in teacher-training than in the high school teaching. Illogical but true. "What is good for the goose is" apt to be "good for the gander."

Prediction One. The time is not far distant when a full program of participation will be a reality for every teacher-training department. The training program will include all of the activities expected of a good agricultural instructor and sufficient practice will be given to insure successful performance by the trainee. If teacher training advances in the next five years the distance it has come in the past five, we will easily reach this goal. The standard program will call for participation in evening and part time instruction and far more emphasis upon the use of supervised farming as an "honest to goodness" teaching device.

II. The Curriculum. The curriculum seems to have settled down. Changes are being made but they are not radical. What of satisfaction as to the functioning of the curriculum? Well, that is a different story. There are several rumblings. One is that the trouble doesn't seem to be primarily one of curriculum construction but the functioning of the content of the courses. It can be expressed in terms of a student not being able to remove a plane bit from a jack plane and to sharpen it, after having spent six weeks in woodwork. Teacher trainers bump into this sort of thing so continuously and so embarassingly that it is a serious matter. So much of their time in directing teaching and other practice has to be spent on simple agricultural practice. The responsibility for turning out a well trained teacher is the responsibility of all the co-operating departments of the institution. No amount of good teaching can overcome faulty agriculture.

Another rumbling is: "Still further reorganization is necessary if the training is to be built on the type-of-farming basis." This can be illustrated by a young man who comes from the potato producing section of the state. He will return there as an instructor. It is not specialization in horticulture that is needed but a study of all the farming that goes with potato farming.

Here is another rumble. The present training program calls for four years. The trainee, largely in his senior year, must learn to perform fairly satisfactorily all that is expected of an agricultural instructor. But he must do the twelve months' job in nine months or less. The trainee seldom has more than half his time for the teacher training practice, and is only a beginner—a novice. Time is crowded. The logical solution is more time—namely a fifth year devoted largely to a teacher-training program of twelve months, and such agricultural specialization as might be needed.

Prediction Two. Decided improvement will be made in producing agricultural instructors who will be good teachers and at the same time sound in their community agriculture. One thing at least is true, a fifth year program will never be instituted until everyone is convinced that the possibilities for improving the four year program have been exhausted. It is also true that the history of professionalizing a specific occupation demanding skill, intelligence and personality does so largely by increasing the training standards.

III. Supply and Demand. For several years the bugaboo of over-production has been on the horizon. However, the vision almost appears as a mirage—we don't quite get there. There were employed in 1926-27 approximately 3,600 agricultural teachers. If length of employment in the occupation was five years (it is less) this would necessitate over 700 new teachers annually. There were in training at the same time about 3,000 students or 2,000 less than in 1923. The number of graduates in agricultural education who wish to teach has never reached any such figure. It still does not provide for new departments. It still is not serving to force incompetent teachers out of the way. But the shadow of over production remains.

An angle not commonly thought of is the quality of the product. An authority recently made the statement that there will never be over-production of good teachers in any field. For the sake of briefness the following assumptions might be made:

The product can be no better than the material teacher-trainers secure.

The problem in teacher-training has now become one of producing a quality product, not quantity.

The agricultural instructors in particular, school people in general, and the college can probably influence the quality of the product more than the teacher-training program by co-operation in guidance.

We do not know the identification marks of good raw material; the characteristics desired nor how to identify them.

Prediction Three. There is no danger of over-production of good teachers. It is doubtful that the average state can ever produce an annual crop of good instructors sufficient to meet its needs every year except by the adoption of plans similar to those suggested in the next section.

IV. Opportunities for Employment Other Than That of Instruction in Vocational Agriculture. "Why consider opportunities open to trainees other than teaching vocational agriculture? Why be concerned with whether there is adequate training available for those who go into closely allied occupations?" Graduation from the curriculum in agricultural education does not necessarily mean that the graduate should be an agricultural instructor. There will be borderline cases—doubtful ones—always, regardless of standards or guidance programs. If not acceptable in view of supply and demand for any one year what will be done with him?

The demand varies considerably from year to year. It cannot be closely estimated for any one state. The ideal would be to have production well in advance of the probable annual need, perhaps 10 to 20 percent. This would provide for emergency years and in average years allow for culling.

There is a great deal of "carry-over" from the training received for vocational teaching to that required for other rural service. But to direct trainees into these other channels without any specific training for their jobs will not insure developing this broader and bigger market. Room for this additional training could be provided by the institution during the latter part of the senior year and the summer following graduation. Finally, why should other avenues for employment of trainees be a matter of concern? The answer is emphatically *adequate production cannot be maintained* otherwise. An indication of a shortage of positions will result in an immediate drop in enrollment.

Prediction Four. We will soon know something of the characteristics necessary for good teaching and how to recognize these in first year students. Every institution will have a good guidance program. The desirable out-

lets for employment other than teaching agriculture will be developed and maintained by furnishing some specific functional training for them. In some institutions it is already possible.

Professional Improvement—The Second Function

Most of our past has been concerned with teacher preparation. Often the more utilitarian aim of meeting state requirements in terms of credits and courses, has been more in evidence. Probably one-half of the instructors now employed received their training from three to eight years ago before training programs were very efficient. At the same time agriculture and vocational teaching have made considerable progress. To keep the body of vocational teachers in step with progress, calls for much more attention to their professional (and technical) improvement than formerly.

1. The Summer School. This past summer there was a tremendous variation in popularity, type and specific objectives for summer schools. Some states have none at all. Instructors as a group cannot attend summer school except that the term be a short one. The state program and the local program cannot permit of long absence on the part of instructors. During the summer of 1928 those states which instituted short courses giving credit served 51 percent of the instructors. But those which still adhered to the old 6 and 8 weeks courses served only 9 percent in their states. In Virginia our enrollment of instructors in agricultural education would have been but 8 in place of 58 if a series of 2 weeks courses had not been provided.

Where the short term was found the program included many especially written courses in agriculture for instructors. At one institution the college instructors who taught these agricultural classes declared them the hardest but the most interesting and productive classes they had ever conducted. Summer school programs have been rather lacking in participation. The supposition probably is that instructors have a good background of experience and therefore can learn without participation. This supposition is not well founded, as anyone can discover by visiting instructors following summer school attendance where it consisted of lectures and discussion. There is improvement but the amount of change by an instructor from the old fixed habits is disappointing.

Prediction Five. The summer school will be adapted to the needs of the instructors as to the length of the course, the choice of subject matter, and the methods used. Its objective will be greater efficiency for the instructor, not a matter any longer of meeting state standards. Participation and high specialization will figure more prominently.

II. Graduate Instruction. There has been a tremendous increase in the number of instructors working toward the master of science degree. This increase in graduate work may be a step in professionalizing the occupation. It will certainly be accompanied by higher standards and a better recognized code of ethics. A state superintendent of public instruction has said concerning the program for vocational agriculture that the greatest contribution to his mind was not the vocational training of farm boys and men, fine as that has been, but the fixing of better objectives, better teaching and better standards for the whole state school system, particularly the rural school. Probably 75 to 95 percent of those receiving the M. S. degree will return to secondary school teaching. Therefore the program leading to the degree should emphasize better performance as an agricultural instructor. Two divergent views exist. On the one hand the degree represents a fifth year of specialized training and the degree resulting is, in a small way only, earned thru graduate research or not at all by research. This is a modern day aspect of the M. S. degree. On the other hand, certain institutions grant graduate credit but the M. S. degree is reserved for those who show some achievement in graduate research in addition to a formal program of courses and study. There are three ways out. Accept one of the aforementioned views or else have two standards for the same degree. With the larger group of students the program would be essentially fifth year work; for the others it would be more largely research. Or a professional degree might be created as in engineering requiring no research.

Prediction Six. Graduate work despite obstacles is going to increase and become more practical. Those departments which do not have graduate programs may find themselves without a summer school and without the privilege of leading and guiding their own state programs.

III. The Itinerant Teacher Trainer. The future of itinerant teacher training, at the moment, appears very uncertain. District suprvision may make unnecessary the attention of the itinerant teacher trainer to local departments. But the growing demand for professionalized subject matter, research, the following up of field problems of graduate students and considerable demand for general service still leaves a field larger than any teacher-training department has yet covered. Any state program and any teacher-training department possessing an itinerant program would be wise in revamping the program but under no conditions letting go of it.

Prediction Seven. The position of Itinerant Teacher Trainer will continue or eventually return to favor where the position is in doubt. The responsibilities will include following the graduates into employment; research; following up graduate students in conducting field problems and keeping instructors up-to-date on agriculture and the teaching profession. The training program must not lose contact with the state program and the actual work out in the state.

IV. Professionalized Subject Matter. This is rather a new movement and therefore somewhat misunderstood. South Carolina, Virginia and New Jersey have made attempts to furnish agricultural experimental data to instructors properly prepared for their use. Colorado and Missouri have published farm shop job sheets which represent what might be termed professionalized subject matter. Something can be done to materially increase the wise use of experiment station data and to tie up the agricultural teaching in the state more closely with the land grant college. A personal illustration might be given. During a visit to a distant department with a group of senior trainees for study of one of the most effective programs in the state, there was observation of a lesson on the control of abortion. What was taught that day was the best known practice three years before but it was far from being the best known practice on that day. This happened with an intelligent, hard working, hard thinking instructor.

Prediction Eight. The responsibility of bringing about the production and the furnishing of the professionalized subject matter to instructors, will soon be accepted as one of the prerogatives of a good department.

Research—The Third Function

There was almost unanimous agreement on the part of teacher trainers as to the need for research in agricultural education, vocational agriculture and all rural education. Out of the 18 trainers and five agricultural leaders this drew more comments than any other features of a teacher-training program. Only one expressed doubt as to whether there was much serious need. A frequent dissatisfaction has been expressed as to the rate at which we (all agricultural educational agencies) are making progress with fixing better attitudes and habits of farming and farm living in our rural communities. Whether justified or not we can surely not be satisfied with thinking we are meeting the task in the most efficient way. Considering the tremendous investment of human energy and funds in the entire field of agricultural education it is surprising that so little methodical study has been given to our methods and to our organization for doing it. It is all, basically, a study of teaching. Being so it would appear that teacher training departments should assume this responsibility when the institution will provide funds and a staff permitting of it.

Prediction Nine. The progressive teacher-training institution will shortly have as a part of its regular organization a man whose chief responsibility will be that of methodical research and investigation in the field of agricultural education. This individual will probably be the itinerant teacher trainer. It will be as commonplace to think of investigation in agricultural education as in agronomy or dairy husbandry.

Note: The fourth function is not of great importance and is therefore not included. Adapted from a paper read before the Association for the Advancement of Agricultural Teaching, Nov. 1928.

A federal appropriation of $200,000,000 for rural education, covering a period of two years, has been proposed in a bill introduced in the national House of Representatives by Representative Glover of Malvern, Arkansas. The funds would be used for the salaries of teachers, supervisors, principals and other elementary and high school expenses in rural areas. The bill provides that only those schools would be aided which include in their courses of study the elementary principles of "agriculture, horticulture, stock and poultry raising, and domestic science."

A Junior Fair

J. C. ADAMS, Minden, Nebraska

"AS THE twig is bent so will the tree be inclined." This old, old proverb has been handed down from generation to generation and its meaning is just as true today as ever before. Training boys and girls to be useful citizens is said to be the aim of all education. To help train them to be better citizens of an agricultural community was the purpose of founding the Junior Fair at Minden, Nebraska.

This fair was an experiment in many ways but like many others has proved to be of much educational value. Unlike most fairs the responsibility rested upon boys and girls less than twenty-one years of age. They had never assumed any such responsibility before but the manner in which they responded showed that the responsibility was not misplaced.

Kearney County, Nebraska, at one time boasted of a thriving county fair but due to poor methods of handling it was discontinued about 1912. Some attempts had been made to revive it but of no avail. Consequently no senior organization could be used as a father to foster the junior fair. As a result a number of the boys of the community were called together to discuss the matter. A fine spirit prevailed among them so a fair association was formed. Plans for financing the undertaking were discussed. The county board of supervisors was induced to appropriate $300 to be used to help defray expenses. Advertising was sold and a premium list was printed. The advertising paid for the printing of the premium list. The city auditorium was secured and also a large building in which the livestock could be housed. The auditorium was divided into booths and the space sold to local merchants. This also helped to bring in some money. The dates of the fair were arranged so that a special dairy train made its stop during one afternoon. This brought in a large crowd of people and helped boost the fair.

An admission fee of 25 cents was charged each person. Exhibitors were charged 50 cents for a ticket which entitled them to exhibit all the articles that they desired. This also admitted them every day of the fair. No carnival or game of chance was allowed on the grounds. The fair was strictly of an educational nature so these were considered as undesirable attractions.

The introductory statement of the premium list during the first year of the fair, 1924, shows the appeal made to the public of Kearney County in presenting the fair the first year. It was as follows:

"We all realize when we stop to give it a little thought that our successes and our enjoyments of life are grounded upon the cumulative knowledge developed thru the experiences of preceding generations. We simply take up the unfinished tasks our fathers and mothers have left and try our best to add a little to the sum total.

"One day in the long distant past one of our ancestors discovered that he could bend a tree branch and stretch a bit of hide between its ends so tightly that when he pulled upon it and let it go it would snap back with a twang. He liked the sound of it and was thrilled with the whip-like power with which the strip of hide sprang forward from his releasing fingers.

"In his pleasure he hurried to the crude domicile of his neighbor and displayed his invention. The neighbor watched him demonstrate the manner in which the strange instrument performed and then asked to try it himself. He pulled upon the thing and he, too, felt the thrill of its propelling power. A third man came up idly swinging a slender stick. He watched his friend as he pulled and let fly and in a flash an idea came to him. He asked to try it and when given the bow he fitted the slender stick to the stretched hide, pulled back and let go. The stick plunged into the soft earth and stuck, quivering from the impact. And so the bow and its ammunition, the arrow, were born to help mankind in his hunting and to protect his life from the attack of beasts and unfriendly people.

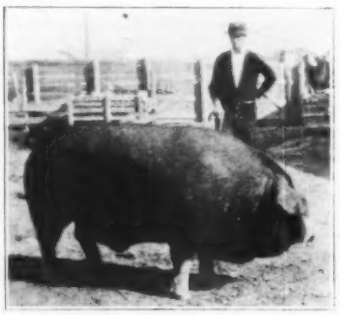
"It wasn't long until all of the tribe had bows and arrows and gradually they learned how to make them better and stronger and how to handle them with deadly effect.

"Had the first man guarded his discovery from the eyes of his neighbors he might have twanged upon its leathern string all his days without ever knowing of or thinking of its possibilities as a weapon. It was thru exhibiting it to his friends and with the help of their ideas that it developed into usefulness.

"In presenting to the citizens of Kearney County the Junior Fair, we are but carrying forward this age-old discovery that by showing what we have and telling how we produced it others can profit from our experiences, improve upon our products and our methods, and come back next year with a better product or better way of using it.

"Its purpose is purely educational. It is hoped that it will inspire the young men and the young women of this county to become better farmers and better home makers, and bring a closer co-operation between parents and sons and daughters in the business of agriculture, which has superseded the bow and arrow in providing food for the races of men.

"It will be a pleasure to us to have you with us on fair days. Your encouragement and your advice can in the course of the coming years make this fair an invaluable factor in the agricultural progress of this community. It can and will pay dividends in both social and economic ways. It is the bow and arrow of farm life improvement, but it needs you to fit the arrow and send it on its flight to success."



First Prize Poland China Boar, Minden Junior Fair

The fair has been held four years now and has been increasing in size and scope each year. It is hoped that it will eventually develop into a county fair that will have a junior division. Several fairs in Nebraska have adopted this plan and it looks like the logical thing in the future. A Junior Fair helps the boy to develop leadership, responsibility and judgment, and teaches him to work with others. It gives him an insight into what life will be later on and the more of these visions that we can give our boys and girls the better prepared they will be to assume their places when the time comes. It also brings them and their work before the public, giving them confidence in their ability.

New Jersey Boys Demonstrate Apple Packing

H. O. SAMPSON
State Supervisor New Jersey

THE Bureau of Markets of our State Department of Agriculture is stressing better packing of fruits and vegetables. Last summer, in co-operation with the State College of Agriculture, they ran an Agricultural Train on the New Jersey Central and Reading Railroads in the state and had on the train Mr. A. B. Rose, a supervising inspector of the United States Department of Agriculture. Wishing to take advantage of the help and experience of Mr. Rose, we staged an apple packing school and contest for boys studying vocational agriculture in our schools. At certain scheduled stops the teachers brought their boys to the train where Mr. Rose demonstrated how to pack apples in tub bushel baskets and explained the advantages of careful packing. He then had each boy pack apples according to his instructions and these packs were scored on the following points: tight pack, tight face, bulge and uniformity. To add a bit of zest to the affair, the railroads offered a first, second and third prize at each contest. These were a fountain pen, an eversharp pencil and a jack knife.

The winners of the local contests assembled at the Trenton Fair, which in this state takes the place of a state fair, and there they competed for the state apple packing championship, receiving suitable prizes contributed by the railroad companies.

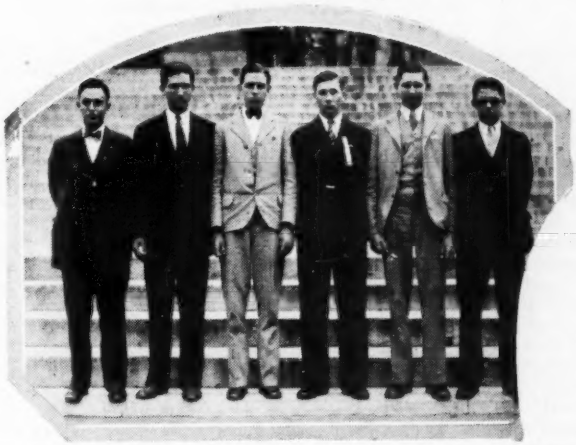
We consider this a very good kind of contest for our agricultural boys. It is practical, as we stress the fact that apples rightly packed have a better chance in the market place than those poorly packed. It takes no time from the regular school work, as it comes in the summer. It is, too, a good example of how agriculture teachers can take advantage of the training and experience of an expert such as Mr. Rose.

F. F. T. Annual Meeting

MORE than 500 delegates attended the second annual meeting of the Future Farmers of Tennessee held at Nashville early in May. Boys were present from every county in the state. The writer has never seen a brighter, keener bunch of young folks in any kind of meeting anywhere.

Donald Moore of Cookeville, the president, presided in a most creditable manner. In fact, we have seen many mature men preside over meetings with far less skill and ability than exhibited by Donald Moore. The incoming president, Kenneth McPherson, showed by several talks made from the floor that he will preside with equal ability.

The two-day session was crowded with business, and yet considerable time was left for entertainment. Excellent talks were made by several, including P. L. Harned, State Commissioner of Education; W. A. Hensley, chairman of the Senate Committee on Education; A. A. Adams, Chairman of the House Committee on Education; Homer Hancock, State Commissioner of Agriculture; and Grady Huddleston, secretary of the Tennessee Bankers' Association.



NEW OFFICERS, FUTURE FARMERS OF TENNESSEE
(Courtesy of the Progressive Farmer)

Left to right: D. M. Clements, state supervisor, organization supervisor; Clyde Cole and Elmo Roland, members of the executive committee; Frank Fox, secretary; Edwin Diggs, vice president; and Kenneth McPherson, president

Commissioner Harned emphasized the point that a young man's agricultural education should include not only instruction as to production, but information as to better marketing, especially along co-operative lines. Another strong point made by Commissioner Harned was his admonition to the boys to save some of their earnings, as he said one positively must do this if he is to go forward.

Commissioner Hancock said there were six big problems confronting farmers and he urged the Future Farmers of Tennessee to interest themselves in these, which are as follows:

1. Production (quality)
2. Marketing (co-operative or other kind)
3. Proper organization
4. Transportation
5. Taxation
6. Proper legislation

Of especial interest was the awarding of the title of "Tennessee Planter" to

(Continued on page 13)

What May We Expect of the F. F. A.?

V. E. KIVLIN, University of Wisconsin

THE Future Farmers of America, the organization of students of vocational agriculture, has been accepted by leaders in agricultural education as one of the big developments in the work during the past year. The organization will afford approach to the problems of agriculture from another angle, i. e., that of the student—a condition which should have a wholesome influence on the work in general. It is so easy to forget the student, the basis of our whole educational program, in many of the plans which are advanced, the plans which have primarily as their purpose that of educating the farm boy along the lines of the agricultural vocation. This does not mean that this organization of agricultural students will solve all the problems of agricultural education, but it can give material assistance and suggestion thru the selection of the outstanding boys who have been subjected to our methods, treatment, and guidance during their high school training.

Primarily the Future Farmers of America offers united action of a group of growing citizens interested in agriculture, a fact which will have its effect in bringing into the vocation co-operative action among farmers of the future which authorities tell us is so woefully lacking today. It was Theodore Roosevelt who said, "If you are to do anything for the average man you must begin while he is a boy. The chance for success lies not with the man but with the boy." The training which members of the Future Farmers of America will receive in group action locally, in the state, and in the nation should have carry over into the organizations of which they as farmers will be members. This training may even lead to the formation of organizations which may even be more effective than those which are in existence today.

The best way to cultivate responsibility in an individual is to give him responsibility. Likewise, the best way to cultivate leadership is to give the individual a chance to lead. This opportunity is afforded thru the Future Farmers of America in that the policy of the organization is to develop and train for leadership from the members, and since the majority of these members are farm boys who according to surveys conducted will return in large percentage to the farm, the leadership of rural America will be improved. There will be less dependence upon the outside for assistance and more help from within in solving the big questions of agriculture.

Educationally we have provided for our agricultural students. Classes have been organized; directed practice programs have been planned; examinations have been held; but very little has been done to offer any sort of recreation to our students. "All work and no play," the old saying goes, "makes Jack a dull boy," and it can in some respects be applied to our work. With the addition of all sorts of labor saving devices and with agitation from several sources for shorter hours on the farm, some attention should be given to training for leisure, otherwise it might be better that "the man with the hoe" were still the farmer of America.

Greater application of the principles of scientific agriculture may result on the home farm thru organized effort by the boys. There will be competition among the boys in the local chapters in achieving the higher grades of membership in the organization. "Green hands" will be working hands toward the higher ranks.

There is nothing magic about the Future Farmers of America; the organization must guide carefully its course if it is to be successful. Many agencies will be willing to sponsor it. Its policy should be maintained on a sound basis and its course planned to the best ability of the advisers in every state to prevent any action which will reflect upon this group of young citizens starting their organization for the benefit of the rural communities of America.

"Chapter Chats"

"CHAPTER Chats," issued by the Future Farmers of Virginia, is probably the leading Future Farmer publication. It consists of 16 pages and is issued bi-monthly. It is well printed on a good grade of paper and carries some illustrations. It is liberally supported by Virginia advertisers.

The Future Farmers of Nebraska held their first state meeting at Lincoln on April 26. Justin Hearne of Kearney was elected president. Ten "Nebraska Farmers" were selected.

Student Organizations in Oklahoma

E. B. NELMS, State Supervisor

ONE of the immediate specific objectives of vocational agricultural education is training boys in the business of farming under their conditions. The general objective, however, is to train for a satisfactory and successful life.

Many of the activities that are vitally essential to this training can be best sponsored thru a student organization.

1. It trains boys to work together and to be democratic. It is education that produces co-operation so necessary for farm relief. It is learning to do by doing. It trains to subordinate the individual interests to the will of the majority. All other interests are organized. To compete successfully, agriculture must be organized. Student organizations are the strongest agencies for developing such ideals and training for co-operation.
2. Agriculture is in great need of leaders, greater need, perhaps, than any other business—almost as great, is the need for intelligent followers. Leaders can be best developed by training and practice in leading. These opportunities are afforded in our Future Farmers organization.
3. Habits of thrift are inculcated by the savings effected in co-operative buying and selling, or by group projects in which their capital is combined and results are achieved that would have been impossible in years by one individual alone. By serving the organized group, boys acquire right attitudes and a consciousness of services due society at large.
4. Social inclinations expressed by men in their membership in various fraternal and civic organizations is felt, also, by the boys and it is vitally important that it be given an opportunity to develop along useful lines. The Father and Son banquests are an expression and culmination of this spirit, rightly directed.

   It might be said that the teacher could conduct all the activities referred to thru the class. Yes, in a measure, but the teacher would take the responsibility instead of the boys. The teacher would make most of the decisions and the boys would miss all this and much more that is very valuable in training them for the responsibilities that will place the business of agriculture and the farm life on a par with any other.
5. It develops an institutional pride and spirit that inspires them in their efforts to enlarge and dignify their department. This often results in increased enrollment due to the efforts of the members.
6. Thru the student organizations, boys acquire incentives that lead them into useful membership in the great farm organizations of adult farmers.

In 79 schools, we have 71 chapters of Future Farmers. Goals or objectives that are common to a majority of these chapters include the following:

1. Father and Son banquets. More than one half held Father and Son banquets. Others are planned.
2. Improving the poultry in the community. Hundreds of flocks have been culled by the boys in their efforts to attain their goals and other improved practices in proportion.
3. Dairy improvement. Many community cow test associations have been organized and conducted by students. More than 50 purebred bulls have been introduced into communities represented, most of it due to the efforts of the F. F. O's. Several chapters have organized stock companies and bought mature bulls of high quality. In one case, the students paid $10 each on the purchase of a bull. The interest stimulated by the dairy work is recognized thruout the country.
4. Terracing farm lands is also prominent in the objectives and many chapters have assumed the responsibility for conducting terracing campaigns resulting in thousands of acres being terraced, much of it by the boys themselves.
5. Pure seed has also come in for much attention with gratifying results.
6. Recreational activities have not been neglected and have had a beneficiary effect upon the whole program.

Some teachers insist that the programs set up by the Future Farmers should be done by the teacher in his class. We grant that they should, but with the student organization taking the responsibilities and assuming the leadership it is done more effectively and more completely and the real purpose of it all is accomplished by the development of the boys.

One teacher reports that the students' ideals of citizenship and co-operation has developed wonderfully since the organization was effected. Another, that, "A number of boys have been influenced to remain in school thru the influence of the F. F. O." Another that, "The student organization gives the boys a much greater interest and vision of community development. When any special community program is on, they feel both the class and the community responsibility at stake. It enables me to put across any program more successfully."

Future Farmers Fair

AT Firth, Idaho, a Future Farmers Fair was staged by the local chapter. Features of the fair were a livestock judging contest, a fitting and showing demonstration, a parade more than a half mile long, a pulling contest, a noon lunch on the school grounds and a speaking program. There were exhibits of both crops and livestock. Chester Mink was the teacher in charge. Five hundred farmers attended.

Frequent articles about the F. F. A. are appearing in farm journals in all parts of the country. Editors seem glad to tell their readers about the activities of the "Future Farmers."

Teachers' Estimates of the F. F. O.

In response to a questionnaire submitted to 77 teachers, 63 responded, reporting the favorable influence of the student organization upon various phases of the program as follows:

	Slight	Great	Very Great	Adverse or not reported
1. Appreciable influence	17	28	15	3
2. Recognition of problems of				
a. Own project	27	29	4	3
b. Home farm	25	28	3	7
c. Community	27	20	8	8
3. Plans and practices for above	28	25	3	7
4. a. Scope and No. of projects	22	25	8	8
b. Ownership of projects	23	25	8	7
5. Attitude toward farming as future business	21	29	7	6
6. Project records	30	22	3	8
7. Home improvement and beautification	32	13	11	7
8. Other school work	35	13	3	12
9. Attitude toward fairs and contests	11	21	31	
10. Leadership	20	24	11	8
11. Participation in adult meetings	25	18	6	14
12. Co-operative enterprises	26	25	12	
13. Thrift—savings	24	17	4	18
	Yes	No		
14. Do student organizations detract in any way from vocational agriculture program	3	60		
	More difficult	Easier	Much easier	More difficult but more effective
15. Effect on teacher's work	4	43	13	2

A North Carolina Chapter Meeting

FOLLOWING are the minutes of the Leicester, North Carolina, Chapter of the Young Tar Heel Farmers for its meeting of March 5, 1929. They are reproduced to show the typical activities of such a chapter and an appropriate manner of writing up the minutes.

"The meeting was called to order by Vice-President George Webb, in absence of the president.

"The roll was called by the secretary. The minutes of the last meeting were read by the secretary and approved by the club.

"Reports were heard from the standing committees. Watsell Plemmons, chairman of the Objective Committee, stated that his committee had gone over the objectives set up by the chapter and listed the objectives already completed and a list of those yet to be done this year.

"The chapter committee reported that it had made a list of the chapter members which would be checked by the agricultural teacher. These names would then be put on the charter by Mr. Gilbert, an expert in penmanship, and that they would have the charter framed and put in the classroom at once.

"Glenn Bridgers, chairman of the Program Committee, reported that this committee had not worked out the other programs but would do so and post programs for the remainder of the year.

"The question of social activities was brought up and after much discussion of picnics, banquets and camping trips the club voted to hold a picnic for the Young Tar Heel Farmers and their families one evening of the week preceeding commencement.

"Special guests were to be invited and the program similar to the banquet program held last year. A picnic committee was appointed to plan the picnic.

"Under the head of new business Mr. Kimzey reminded the chapter that the time of the state meeting was coming near and that the Leicester chapter would want to send a candidate to this meeting for the degree of Carolina Farmer. He suggested that a committee be appointed to study the requirements for this degree and to look up those eligible and nominate a member. This committee was appointed as follows: Gay Kenerly, Mq. Hutchinson, Hal Wells.

"There being no further business the following program was rendered:

Shower Baths for Hogs
by Hoyle Plemmons
Report on Marketing Poultry
by Nathan Gillespie
An Agricultural Classic
by Drew Roberson
Poem on Nature
by Watsell Plemmons
Constructive Criticism
by R. M. Kimzey

"The time being up, the meeting was adjourned by the chairman."

F. F. T. Annual Meeting

(Concluded from page 11)

18 members. Three of these were from the Medina High School and two other boys from the same county were awarded this honor, making five of the 18 from Gibson County.

Enthusiastic approval was given to what was being done toward improving the camp site donated by N. A. Ward and family. The camp will be ready for use this year. The first camp date will be July 8 and the last one will close on August 31. There will be accommodations for 110 for each week of the eight weeks period. Next year the camping period will be prolonged to 10 weeks and the accommodations will be for 200 and the following year for 300. The cost is $6 per week per boy. No boys can come except those who are regular Future Farmers of Tennessee and who are accompanied by their teacher of vocational agriculture. They may attend but one week.

There are 118 active chapers organized in the state now, all of which have been chartered under the laws of the state. The total membership is 3,100.

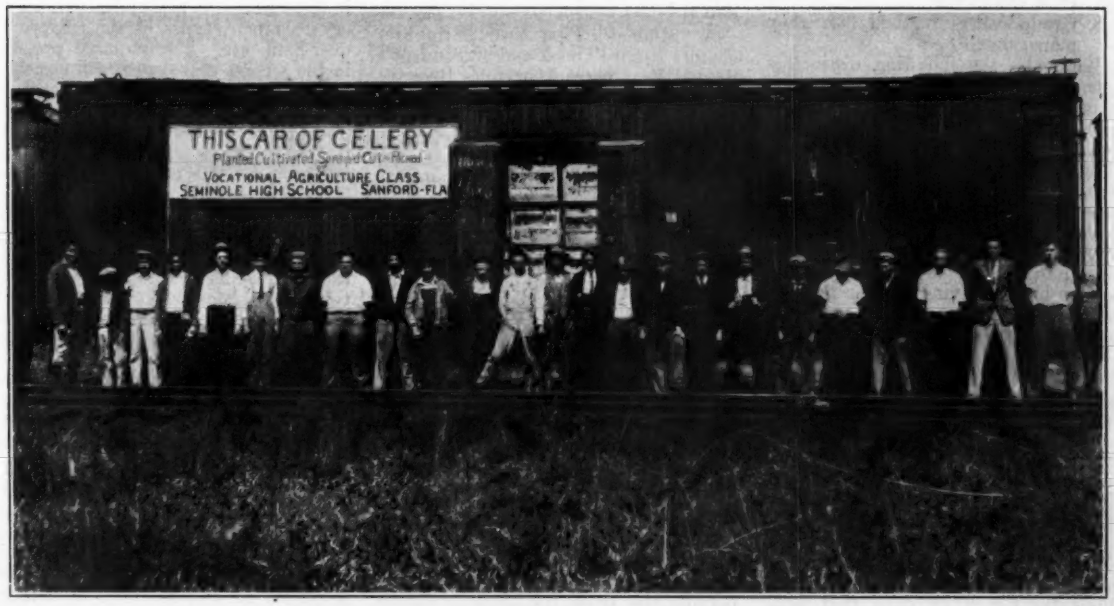
The largest attendance at the state convention was from the Goodlettsville High School which had 50 present

At the 1928 convention $200,000 was set up as a goal for farm investment by the close of the year. This amount was exceeded; at the convention reports showed that the members actually had in farm investments $240,000. This represents their own earnings and not something given them. In addition, these reports showed that the boys had in savings banks approximately $55,000. —*L. A. Niven, in "The Progressive Farmer."*

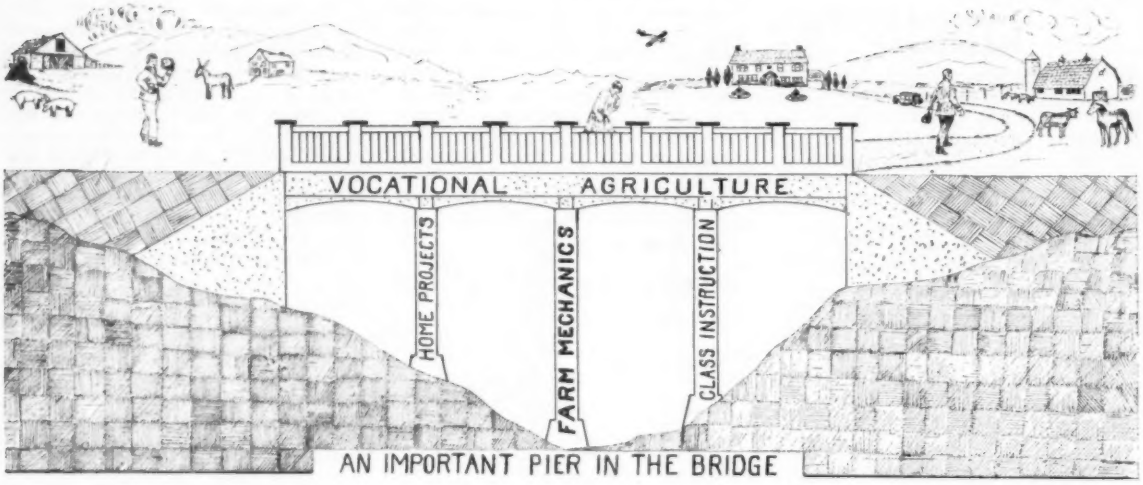
Make Own Mud Scrapers

MUD-TRACKED floors may be avoided even during the rainiest seasons of the year. Several kinds of mud scrapers can be made with a small amount of labor. If scrapers are used faithfully they will save much work for the busy housewife. One useful type is made by using two brushes. The sides of the brushes are fastened onto a flat surface so that the bristles are toward each other. The brushes need to be placed about the width of a person's shoe apart. A strip of old steel or iron may be fastened between the brushes to clean the bottom of the shoes. The bristles clean the mud from the sides of the shoe while the metal scrapes it from the bottom. Inexpensive fiber mats placed outside of the door are good mud catchers. The dirt can be removed by gently shaking the mat. An old broom at the door often reminds the men and boys to use it to clean their shoes before coming into the house.—*University of Nebraska Agricultural College, Extension Notes.*

J. D. Blackwell, State Director of Vocational Education for Maryland, received the Ph. D. degree at the University of Maryland on June 11. His dissertation subject was "The Organization and Supervision of Vocational Education in Maryland County High Schools."


THIS CAR OF CELERY
Planted Cultivated Sprayed Cut Packed
VOCATIONAL AGRICULTURE CLASS
SEMINOLE HIGH SCHOOL SANFORD-FLA

Car of celery grown on land laboratory at Sanford, Florida



A Program of Farm Mechanics for Vocational Agriculture Boys

By H. D. ELDRIDGE,
Greeley High School, Greeley, Colorado

IN OUR efforts to develop a farm mechanics program for vocational agriculture pupils in the Vocational Agricultural Department of Greeley High School, Greeley, Colorado, we have emphasized the necessity of widening the scope of the pupil's farm mechanics activities at home. This has been accomplished thru the use of the following devices:

1. A Farm Mechanics Accomplishment Record.
2. A Student's Farm Mechanics Record.
3. Job sheets in Motor Mechanics, Farm Blacksmith Repairing and Farm Shop Work.
4. A Community Farm Mechanics Survey.
5. Co-operation of local farm machinery and tractor dealers.
6. Check on summer farm mechanics activities of pupils.
7. A follow-up program in part-time class instruction.
8. Group-leader method of shop management.

We make the following distinction between farm mechanics projects and farm mechanics jobs. A project in farm mechanics is a definite unit of instruction of considerable scope preferably involving new problems for solution, selected by the pupil in which increased efficiency is desired in both skill and knowledge. The following are projects: Repairing a Fordson; Repairing a mowing machine; Constructing a poultry house; Laying a concrete foundation; Repairing a set of harness and Improving the farm shop at home. Projects may be individual, group or class projects depending upon the needs of the pupils and the opportunities afforded by the community and the school. The project in farm mechanics involves two important factors: 1, voluntary selection of the project by the pupil and 2, increased efficiency in both skill and knowledge in the completion of the project. It will be noted that increased efficiency may or may not involve *new* skills and knowledge. This eliminates the "I've done that once before" type of pupil who hops from one project to another without becoming efficient in doing any one of them.

A job in farm mechanics is commonly a natural unit of work involved in a project. For example in the project of repairing a mowing machine the following jobs may occur: (1) Replace broken pinion gear; (2) Replace straps on pitman; (3) Replace worn sections; (4) Registering the cycle-bar; (5) Aligning the cycle-bar; (6) Replacing worn springs and pawls; (7) Painting.

A "Farm Mechanics Accomplishment Record" is utilized for the purpose of: (1) measuring the development of each individual pupil and, (2) testing the efficiency of the instruction in farm mechanics. This record consists of a series of jobs in representative farm mechanics projects. Pupils check the jobs, (a) in which they are experienced and, (b) those jobs in which they merely have observed some one else complete. This checking process is done the first week and the last week of school. Jobs not included in the suggested list in which the pupil has had experience or has observed may be added by the pupil. Farm mechanics projects undertaken during the entire year, in school and at home, are included in the record.

A "Student's First Year Farm Mechanics Record" book and a "Student's Second Year Farm Mechanics Record" book is used in the first and second years of farm mechanics work. More emphasis is placed on repair work than on construction work. The pupil's attention is directed to the amount of money which he is saving in making such repairs and in doing construction work. The selection of projects, both in the required and elective projects, is guided by: (a) the individual needs of the pupil; (b) the type of farm mechanics projects being carried on in the community and, (c) a State survey of farmers in regard to the type of farm mechanics work which they considered most important.

The "Student's First Year Farm Mechanics Record" includes such required projects as: (1) Improving the shop at home; (2) Doing farm carpentry work; (3) Repairing harness, etc. The projects which are required are type projects requiring less than 50 percent of the pupil's time to complete. This permits the pupil considerable choice of elective projects. A home shop inventory is taken by each pupil. The following items are included in this inventory: (a) List of tools needed in shop at home; (b) List of equipment needed in shop at home; (c) List improvements which you have made and, (d) List improvements to be made in the future. While taking the inventory, the pupil is required to clean up the shop at home and make it presentable for an inspection to be made later by the entire class. An additional item in the first year record book is a list of "Repair and Construction Jobs Completed at Home." The emphasis thruout the farm mechanics course is placed on the development of the scope of such activities as practised by the pupil at home.

The "Student's Second Year Farm Mechanics Record" is set up in a similar manner to that of the first year record book. A farm machinery inventory is added to the regular farm shop inventory. Some of the required enterprises consist of: (1) Improving the shop at home; (2) Over-hauling and repairing farm machinery; (3) Making gas engine repairs, etc. After outlining the required projects, choice is given a pupil in the selection of types of farm machinery to repair, types of gas engines to over-haul, etc. The required projects in the second year course will consume about 50 percent of the pupil's time. An advantage in requiring a few type projects is to prevent pupils from devoting the majority of their time on but one project. It is essential that a more balanced course be offered to pupils in vocational agriculture than that which, if left entirely to their own devices, they would choose for themselves. By the time pupils have completed the first two years of farm mechanics they are mature enough and have enough basic skill and knowledge to select *all* of the farm mechanics projects which they will work on during the third year. In both first and second year record books, project and job records are kept as to time on the job and total costs.

Courses in "Motor Mechanics," "Farm Shop Work" and "Farm Blacksmith Repairing" have been developed by the instructor on the job sheet basis. In addition, slides made from photographs of farm mechanics activities of pupils, as well as slides of a more

(Continued on page 16)

Boys Rig Up Motor Outfit for Treating Grain

By E. M. TIFFANY,
Madison, Wisconsin

BUSY brains are better than blisters," say the agricultural students in the high school at Oregon, Wisconsin. These students with their agricultural instructor, Clarence H. Bonsack, have recently planned and built a motor driven mixer for dust treating seed grain. The grain had to be treated. The boys wanted to try the new dust method. They believed in making the head save the heels and the hands and so set about to spare themselves the puffy palms and tedious hours that go with hand-powering a mixing machine.

There was no money to buy a regular outfit. They got an idea from a bulletin about mounting an oil barrel. Then they set to the problem of rigging it up to use a motor. Pulleys and sprockets, motors and belts, speed and speed ratios, strain and vibration, convenience in handling and estimates of cost were some of the things puzzled over in the classes.

$12.50 worth of lumber, bolts, belt, and welding, and a few articles salvaged from the junk heap were hooked up with a one-fourth H. P. used motor bought for $10. The scrap pile contributions included a front wheel and spindle from an old Ford, a pulley and balance wheel from a discarded school lathe, a sprocket wheel and chain from a junked end-gate lime spreader, another sprocket from an old chain drive mower, and a piece of 1½ inch pipe.

A "right-hand man" in helping to work out the ideas was William Bower, the veteran janitor. Formerly a farmer himself and handy with tools, Mr. Bower took a keen interest in the project and was always ready to help the school in constructing and the farmers in using this equipment.

The original purpose was to make something that the boys could use to treat their own seed grain. They ran thru a few bushels by hand. Then they got the motor hooked up and the farmers began driving in with wagon and truck loads of grain. Mr. Bonsack's records list 50 farmers who treated a total of 2,252 bushels of oats and barley, ten times as much as they had planned for. They used 250 pounds of ceresan. The school charged 8 cents a bushel for oats and 10 cents a bushel for barley when the school furnished the material. When the farmers brought their own material a charge of 1 cent a bushel was made for the use of the machine. There was enough profit to return the cash outlay.

Most of the work in handling the grain after the project got going was done by the farmers. The school hired a man full time during the rush. The boys helped in squads scheduled to avoid as much as possible the interference with classes. After the demonstrational stage, the school plans to leave the work more to the farmers. At present, it was felt that the educational and promotional value of the project justified a special effort.

The farmers recognized the economy and convenience of this method of treating grain and were impressed by the ingenuity shown in the application of power. "My brother-in-law," said one farmer, "treated his grain in an old barrel churn. It cost him 12 cents a bushel besides his labor. Here it costs me less and the machine does the work quicker and better."

The machine can be put to other uses. It will mix feeds or grass seeds and is all set to treat the seed for this season's planting of corn.

Building the Farm-Mechanics Shop as a Class Project

By PAUL F. SWEITZER,

IN THE summer of 1927 the local school district voted a mill levy to raise $1,800 to be used in building a new farm shop in connection with the Vocational Agriculture course in Cody High School.

Plans were made to build a structure 24x50 feet, concrete floor, T-lock shingles, and stucco walls with arrangements inside to accommodate the various units of shop work as taught during the school year.

The foundation was laid in August, being located near the high school building so that steam heat, gas and water could be used from the central system of the high school building. With the opening of school the first week in September, the work was outlined to the agriculture students and actual construction begun. The enrollment totaled 22 boys, consisting of a morning and an afternoon group. All class work was dispensed with and each day saw each class working on the building during their regular class time.

A carpenter was in charge, helping where necessary and acting as a general supervisor but the actual work done by the boys themselves.

Each boy was given a chance to do a little of each job, such as plumbing, sawing, nailing, concrete work, stucco, painting, etc. Work was pushed and with the aid of good weather the outside walls were completed the first week in November, after which all work was that of finishing the interior. Steam heat was brought from the main building and radiation installed in the shop. A gas line was also included and a small gas stove set up. A sink with hot and cold water was put in and a floor drain from the center of the shop made it convenient to flush out the entire shop.

The inside walls were finished by laying on a layer of building paper and covering with drop siding. The ceiling was left open; the space above being used for storage. A tool and nail cabinet was built and a cabinet for paints was made. A wall bench with wood-working vises was built around three sides. A screw cabinet occupied one corner and space had been left for six hand forges, to be installed later. A large double door to admit large machinery is in one end and a small door is included. Plenty of light was admitted by having windows on the three sides where the work benches are located. Lumber is stored above and on built-in arms above the windows. Electric lights were put in.

The entire cost of the shop was kept below the budget and all work was done by the boys. The first of the year saw the work practically completed except the building of benches, cabinets and similar inside work which was done during the spring. The building was given a coat of paint before school closed. Class work was begun in both classes in November and a normal class schedule followed from that time on.

This made a very good class project and worked out very well, giving the boys some very valuable experience. The shop is now being used every day and improvements being made each year. A similar plan can be followed by almost any department desiring to build a shop. Pictures taken at various stages of building show the progress made and accurate cost accounts were kept that show the actual cost of the building.

How We Got a New Farm Shop

By WM. B. O'DONNELL,
Instructor in Vocational Agriculture,
Raton, New Mexico

THE Vocational Agriculture Department of the Raton High School was badly in need of an extra shop building to do forge work, auto mechanics and farm machinery repair work in.

The appropriations had been entirely used up except for $175. Altho this sum was very small, it was decided to tackle the proposition even tho insufficient funds were available.

The boys of the department were asked to submit plans for the building. The one selected was a shed roof type, being 248 x 18 feet.

The foundation was dug on the south slope of a hill adjoining the school grounds. The work was slow and difficult due to the fact that five feet of shale rock had to be picked out. However the boys tackled it with real pep and soon were ready to put up the concrete form. This was trued by means of a farm level, and bolts were used to set the sill. The bolts were set in the concrete. The sand, rock and gravel were obtained by the boys of the class in order to save funds.

The lumber was selected from the local mill by the boys and placed in the furnace room of the school to become fully dried. The walls were constructed of drop siding, (Arizona fir).

When it came to the shop doors the first snag was hit. Because of the wide door-way the problem was increasedly hard. Finally three boys were given the lumber for the doors and moved to the manual training department to construct the doors. They were made of 2 x 6 inch and 3 inch flooring. Three doors were made, the right door opening first, the center and left doors being hinged and folding together, swinging to the left.

The building has been given two coats of dark brown house paint and is trimmed in white. This gives a very attractive appearance.

Altho only 115 minutes a day could be put in on the construction, the boys working in groups finished the project in very satisfactory time.

"The Biggest Little Fair in Ohio" is the term applied to the Junior Fair to be held this year on August 5th to 8th at Ashley. This is the fifth year for the fair. Management in the association which manages it is limited to persons under 21 years. A 14-page premium list is available. Lawrence Augenstine, "American Farmer" is a member of the board of directors of the fair.

Members of the class at Ranger, Texas, are conducting a Parcel Post Cow Testing Association.

Studying farm machinery in class at the Clintonville, Wisconsin, High School Courtesy Wisconsin Agriculturist

Reclaiming Farm Implements in Mississippi

R. I. JOLLY, teacher of vocational agriculture in the Ponta Consolidated Smith-Hughes school, Lauderdale county, Mississippi, needed a plow for his laboratory plot on the school ground. He remarked to a patron that he would like to get an old turning plow that had been discarded, but which might be repaired enough for use on the laboratory plots. The patron said, "I have one that I threw away which you may have."

The instructor went after the old plow. Two dollars purchased enough parts to remodel it. During one class period in Farm Shop Woodrow Covington, one of the students, with a little supervision, fixed it up in first class condition.

Davis Brown, another vocational student whose father is a barber in Meridian but who lives on a small farm near Marion, seeing the plow before and after it was fixed said, "There is an old plow at home that was there when we moved in. May I bring it and fix it here?"

"I want you to bring and fix it. Repairing farm implements is part of our shop work," said Mr. Jolly.

The next day Davis brought the plow. They got a new land side, a new point, a pair of new handles, and enough bolts to fix it. The plow when completed was practically as good as new. The entire cost, paint and all, was $2.10 and four and one-half hours of work. A new plow of the same make and kind costs $10.50.

This is only the beginning of the repair work that has been done by Mr. Jolly's class this year. It is an example of what is being done by a large number of Vocational Agriculture teachers over Mississippi.

Several fathers joined their sons in the three-day camp of the Future Farmers of Santa Rosa, Texas.

A Program of Farm Mechanics

(Concluded from page 16)

technical nature are used. Supplementary to certain types of farm mechanics work are demonstrations by the instructor, by carpenters, mechanics, etc.

A "Community Farm Mechanics Survey" as a class project was completed during the past year. This survey was made for the purpose of: (1) Determining the total amount of money invested in farm shop and in farm machinery; (2) Determining the kind and amount of farm shop equipment to be found on the average farm in the Greeley district and, (3) Determining the kind and amount of farm machinery to be found on the average farm in the Greeley district. Studies were made of the results of the survey in relation to the farms of each pupil in the class.

A device which is used in every farm mechanics course is that of securing the co-operation of local dealers in farm machinery, tractors, etc. Local dealers furnish parts for demonstrations in farm machinery and motor mechanics work. They, also, furnish men and machines for demonstrations. When necessary, new farm machinery is loaned to the agricultural department for work in tearing down and assembling. The department was given the use of a Fordson tractor for a year in which time it was utilized by pupils in doing their supervised practice work. Repairing and over-hauling projects were carried out thru use of the Fordson.

A check on the farm mechanics activities of individual pupils is made during the summer when the instructor inspects the supervised practice work of pupils. The scope and nature of such work is noted. A list of farm mechanics projects is made at each farm which the pupil may engage in during the coming year. In this way, a further check is made on the carry-over which the farm mechanics courses have in the participation program of the pupil.

As a final device in developing a farm mechanics program for vocational agricultural pupils, part-time classes in farm mechanics have been organized. Such classes have been held for the past two years, with another one scheduled for the coming year. The average enrollment for the two years has been 46 pupils. Graduates of the local high school, as well as of neighboring high schools make up a large percentage of the enrollment. The course this year met for three hours a night, four nights a week for six weeks. Pupils selected their own projects. A third part-time class was held three years ago in "Farm Business Practice" and "Crop Production," which illustrates the fact that this particular type of pupil will take advantage of such courses if they are given an opportunity. It is not difficult to develop a program in farm mechanics with pupils who devote two or three years of work while in school and attend short courses after graduating from high school.

Classes of 25 or 30 pupils often present a problem in shop management. In such cases, the group-leader method facilitates instruction. The group-leader is a pupil who is chosen to direct a group of three to five pupils in doing a particular job or jobs, involved in a farm mechanics project, in which he is especially proficient. The three years of farm mechanics work offered in Greeley High School, together with the two farm mechanics part-time courses operate on a group-leader basis and utilize the devices which have been outlined to develop a farm mechanics program for each pupil enrolled in vocational agriculture. Comments and criticisms of this set-up of farm mechanics work will be welcomed by the instructor.

Several states and a few local chapters publish special F. F. A. news letters. This is a fine way to let the folks know something about the organization.